

LETTERS TO THE EDITOR

Is the Hippocrates Paradox Really a Paradox?

In the Editorial Comment by Lavie and Milani (1) accompanying the report by Reeves and associates (2), the correspondents used as their title “Obesity and Cardiovascular Disease: The Hippocrates Paradox?”. Lavie and Milani began their comment by quoting a statement by Hippocrates, namely, “Sudden death is more common in those who are naturally fat than in the lean.” Clearly Hippocrates recognized the association between obesity and cardiovascular disease. According to the *American Heritage Dictionary of the English Language*, paradox is “a seemingly contradictory statement that may nonetheless be true” (3). Because Hippocrates recognized the association between obesity and sudden cardiac death, his quoted statement is therefore not a paradox.

The use by Lavie and Milani (1) of the word “paradox” is reminiscent of the description of “pulsus paradoxus” in cardiac tamponade. As Spodick stated so succinctly in his book (4), “Pulsus paradoxus, as Kussmaul described it, was a change in a pulse (*pulsus*), not a pressure. Indeed, he had no blood pressure cuff or catheter, and it *was* ‘paradoxical’ to him, since the radial pulse disappeared intermittently (during inspiration) while the heart continued to beat without interruption. Pulsus paradoxus is an exaggeration of the normal phenomenon of an inspiratory fall in systolic arterial pressure.”

Perhaps, Lavie and Milani had in mind the same phenomenon of an exaggeration when they coined the term “the Hippocrates paradox” because Hippocrates not only associated obesity with cardiovascular disease, but went further to associate obesity with sudden death due to cardiovascular disease. Hippocrates also condemned overeating: “Repletion, carried to extremes, is perilous” (*Aphorisms 1*), and he warned against exercise after eating: “Fat people who want to reduce should take their exercise on an empty stomach” (5). Furthermore, Hippocrates observed that obesity also predisposed to cerebrovascular disease and that the slender person is likely to outlive his heavier neighbor (6).

Tsung O. Cheng, MD, FACC

Professor of Medicine
George Washington University
Medical Center
2150 Pennsylvania Ave., NW
Washington, DC 20037
E-mail: tcheng@mfa.gwu.edu

doi:10.1016/j.jacc.2003.11.006

REFERENCES

1. Lavie CJ, Milani RV. Obesity and cardiovascular disease: the Hippocrates paradox? *J Am Coll Cardiol* 2003;42:677–9.

2. Reeves BC, Ascione R, Chamberlain MH, Angelini GD. Effect of body mass index on early outcomes in patients undergoing coronary artery bypass surgery. *J Am Coll Cardiol* 2003;42:668–76.
3. The American Heritage Dictionary of the English Language. 4th ed. Boston, MA: Houghton Mifflin, 2000.
4. Spodick D. The Pericardium. New York, NY: Marcel Dekker, 1997: 191.
5. Cheng TO. Hippocrates and cardiology. *Am Heart J* 2001;141:173–83.
6. Katz AM, Katz PB. Diseases of the heart in the works of Hippocrates. *Br Heart J* 1962;24:257–64.

REPLY

We appreciate Dr. Cheng’s comments, and we agree that Hippocrates recognized the association between obesity and cardiovascular disease and that his famous quotation is not a paradox. In the title of our editorial (1), we placed the question mark to emphasize that we were questioning this paradox. More importantly, however, we were trying to use Hippocrates’ quotation as a “catchy” introduction to the puzzling “obesity paradox,” meaning that, although obesity contributes to the development of several cardiovascular diseases (hypertension, heart failure, and coronary artery disease), in many situations as discussed in our editorial (1), paradoxically the prognosis of the obese patient with the disease has been better than that in the leaner patients with the same disease (2,3). We agree with Dr. Cheng’s comments on the accurate meaning of the word “paradox” and the errors frequently made using this term, and we appreciate his attention to detail. Likewise, we also enjoyed reading the additional words from Hippocrates relating to the perils of obesity.

Carl J. Lavie, MD, FACC

Richard V. Milani, MD, FACC

Department of Cardiology
Ochsner Heart and Vascular Institute
1514 Jefferson Highway
New Orleans, LA 70121
E-mail: clavie@ochsner.org

doi:10.1016/j.jacc.2003.11.007

REFERENCES

1. Lavie CJ, Milani RV. Obesity and cardiovascular disease: the Hippocrates paradox? *J Am Coll Cardiol* 2003;42:677–9.
2. Lavie CJ, Milani RV, Mehra MR, Ventura HO, Messerli FH. Obesity, weight reduction and survival in heart failure. *J Am Coll Cardiol* 2002;39:1563.
3. Lavie CJ, Osman AF, Milani RV, Mehra MR. Body composition and prognosis in chronic systolic heart failure: the obesity paradox. *Am J Cardiol* 2003;91:891–4.